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BFH¹ (Anonymous, 1999)

:

() (P)

) (M)

((m)

) (Q₂)

(

) Q₂ = 2000 × p / (M+K)² - (m+K)²

(= (×) ÷ [(+) (+)] = /

SPSS

Kolmogrov-Smirnov

(Anova-One-

Duncan Way)

() ()

()

(Transformation)

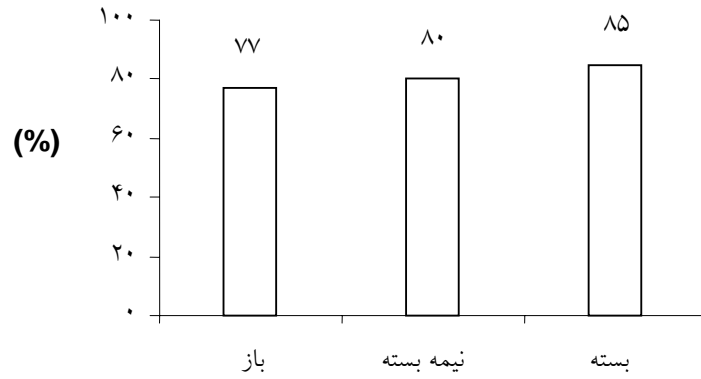
Mann-Whitney U Kruskal-Wallis

(χ²)

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...

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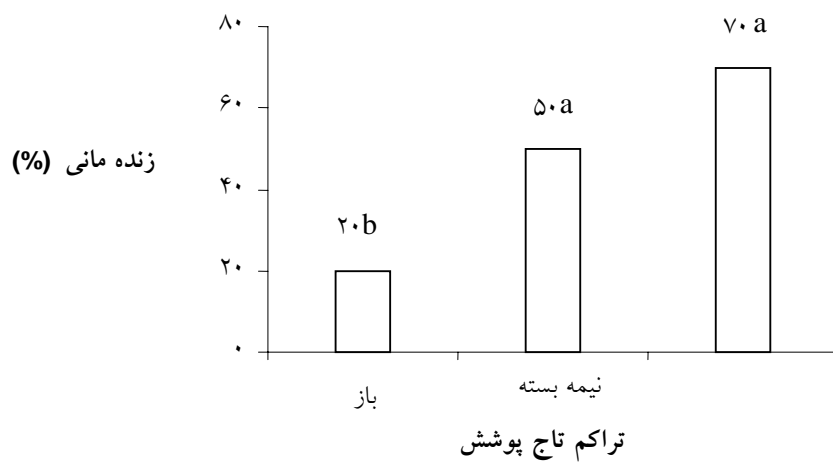
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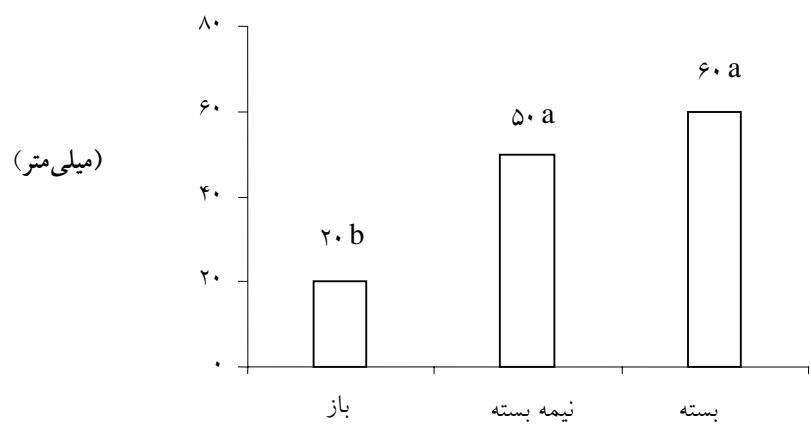
(χ^2)

P=12.60, d.f.=3

($\chi^2 = 0.035$)



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() ()
Fagus orientalis
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 () () ()
Fagus sylvatica) ()
 () ()
Fagus sylvatica ()
Quercus robur () ()
)
Fagus orientalis
 ()
Fagus
 () *sylvatica*
 ()
Fagus ()
Fraxinus excelsior sylvatica

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Fagus ()
orientalis
(/)
() ()
Fagus orientalis

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Initial results of some characteristics in *Fagus orientalis* seedling as affected by canopy density, after soil scarification and seed sowing

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Abstract

Some characteristics of oriental beech (*Fagus orientalis* Lipsky) seedling were compared in three different beech stands with canopy densities of 15% (open), 55% (semi-closed) and 85% (closed), located in north of Iran (h=1400 m a.s.l.). In the center of each stand, following the elimination of herbal vegetation and shrubs, a soil scarification, together with beech seed sowing, was performed in four plots of 100 × 100 cm. The results of the first growing season demonstrated that seed germination rate did not differ with increased canopy density. Survival and shoot growth rates in seedlings were smaller in open canopy; however, no statistical difference in these characteristics was found between closed canopy and semi-closed canopy. Foliage discoloration elevated as canopy opening increased. It can be concluded that at early felling, creating the stands with canopy density ~ 40-60% is more suitable for growth, establishment and vitality quality in beech seedlings preceded by seed sowing following soil scarification.

Keywords: *Fagus orientalis*, canopy density, germination, growth, seed sowing, soil scarification, survival